

EARLY CHILDHOOD UTAH

BUREAU OF MATERNAL AND CHILD HEALTH

DIVISION OF FAMILY HEALTH AND PREPAREDNESS

UTAH DEPARTMENT OF HEALTH

UDOH, Bureau of Maternal and Child Health, Early Childhood Utah, ECCS Final Outcome Evaluation Summary

Developmental Health Screening

An estimated 15% of children (ages 3-17) in the United States have at least one developmental delay, yet less than one-fifth of those children receive early intervention services before three years of age. Only 3% of all children received public early intervention services by three years of age in 2014. The percentage of school-aged children receiving public intervention services reaches a peak of 12.5% between the ages of nine and 12 years. Risk factors for developmental delay include male sex, lower socioeconomic status, perinatal risk factors, and lower level of maternal education.¹

Early intervention is effective in high-risk children and associated with improvements in cognitive and academic performance. Parent-completed tools are preferable to directly administered tools in the primary care setting because of time constraints. The most extensively evaluated parent-completed tools are the Ages and Stages Questionnaire (ASQ) and the Parents' Evaluation of Developmental Status (PEDS). Pediatric caregivers should be familiar with developmental screening tools and the limitations and strengths of these tools. Additional evaluations and referrals are recommended if screening suggests developmental delays are present.

Many barriers exist to infants, toddlers and young children receiving routine developmental screening. One way to address these barriers is to incorporate developmental screening practices into the workflow of all Pediatric and Early Care & Education settings. The use of a validated screening tool at regular, repeated intervals, in addition to physician surveillance at well-child visits, may improve early detection.

The Utah Department of Health (UDOH) was one of 12 states to receive the Health Resources Services Administration (HRSA)/Maternal and Child Health Bureau (MCH), Early Childhood Comprehensive Systems Impact-Collaborative Improvement and Innovation Network Grant (ECCS). The ECCS grant was awarded for Federal Fiscal Years 2016-17 through 2020-21. The primary aim of the ECCS grant was to improve the developmental health outcomes for 0-3 year olds that reside within three targeted, or Place-Based Communities. The three Place-Based Communities (PBCs) chosen were Ogden (84401), South Salt Lake (84115) and San Juan County.

In order to meet the objectives of this grant, the UDOH Early Childhood Utah program worked closely and consistently with PBC leads and community-based programs to improve access to families with young children to developmental health screening opportunities. Through the ECCS grant, UDOH funded, maintained, trained and enrolled Early Care & Education and Health programs in the UDOH *Brookes Publishing Ages and Stages Questionnaire Online Enterprise Account®*.

¹ Vitrikas, K, Savard, D, Bucaj, B. Developmental Delay: When and How to Screen. Am Fam Physician. 2017 Jul1;96(1):36-43

Community-based participation in the UDOH ASQ Online Account not only facilitated additional screening opportunities but screening data helped community and state early childhood leaders make data informed decisions. The *ECCS 2016-2020 Final Report* highlights PBC screening and referral data from baseline years (2015/16) through 2020 along with presenting statewide screening data for contextual and comparison purposes.

ECCS Grant, Early Childhood Utah Objectives include:

#1: Increase the number of place-based community screening programs enrolled and participating in the UDOH ASQ Online Enterprise Account.

- The data presented in this report show an increase in the number of PBC screening programs participating in the UDOH ASQ Online Enterprise Account with a peak in 2019 and a decline in 2020 likely attributable to service disruptions related COVID 19.
- According to 2019-2020 National Survey of Children's Health data, for children 9 months to 35 months, Utah increased screening percentages from 29.1% in 2018/19 to 34.2% in 2019/2020.

#2: Integrate Help Me Grow Care Coordination services into the place-based communities.

- The data presented in this report display an increased infusion of Help Me Grow Care Coordination Services within all three PBCs.
- All three PBCs and Help Me Grow anticipate continuing these collaborative efforts.

#3: Decrease the percentage of children (0-3) residing within the PBCs that fall below cutoff on the ASQ-3.

- The data presented here consistently demonstrates within each PBC and across Utah, the more children screened, the more children that are discovered with mild, moderate or marked developmental delay. On average, 8-9% of children screened (all ages) are below cutoff on the ASQ-3 and/or the ASQ SE:2. When one examines screening results data at a program level, between 1%-21% of children are experiencing developmental delay. Typically, 60% of the time, delay is found in one domain only; 20% of the time delay is experienced two or three domains, it is rare (4%) of the time that a child is behind in all five ASQ-3 domains (communication, gross motor, fine motor, problem solving and personal-social).
- Data analysis performed by Weber State University, in partnership with Prevent Child Abuse Utah's Parents As Teachers Program (Ogden), demonstrated children scoring below cutoff, that received ongoing services and regular/repeated developmental screening improved their disposition. Please refer to *Appendix A*.

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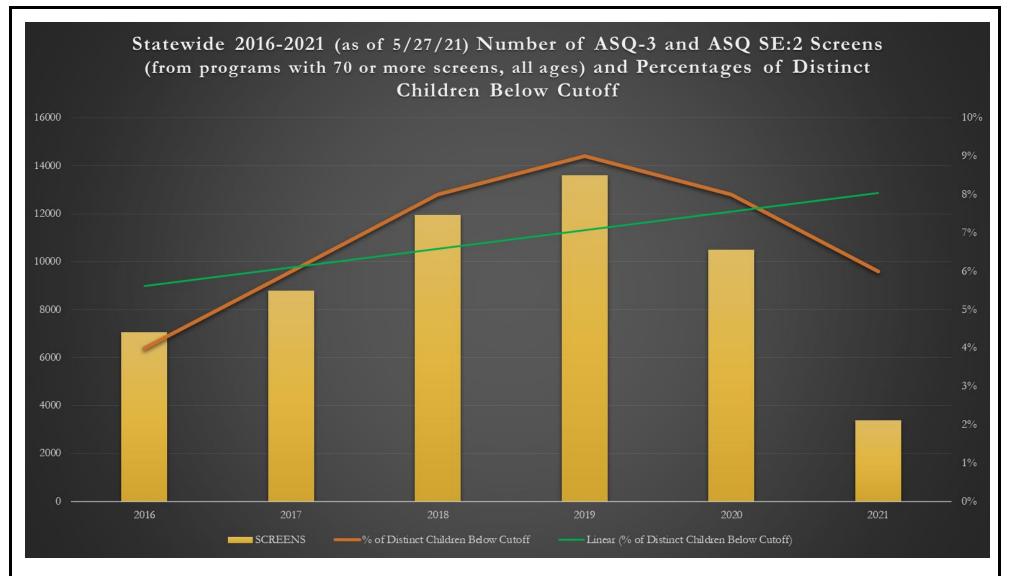
Page 11-18: South Salt Lake (84115), ASQ and ECIDS Service Summary data

Page 19-26: Ogden (84401), ASQ and ECIDS Service Summary Data

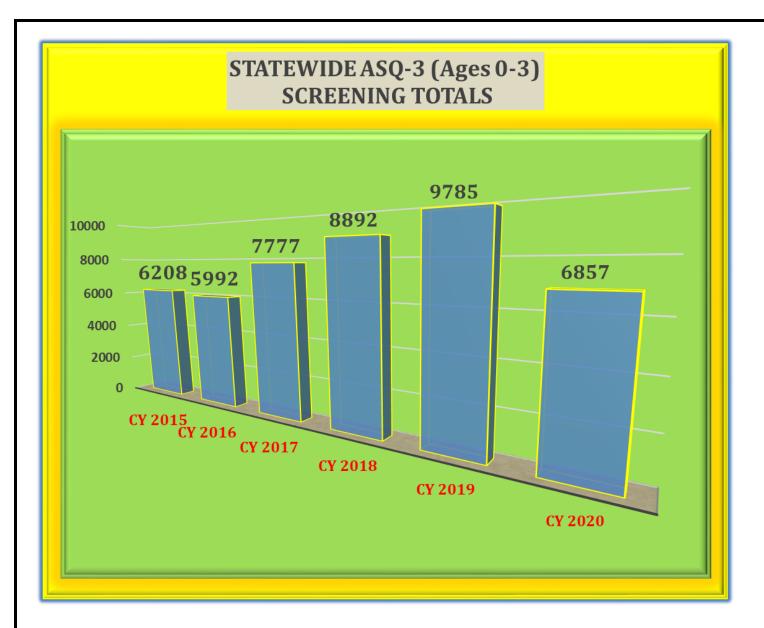
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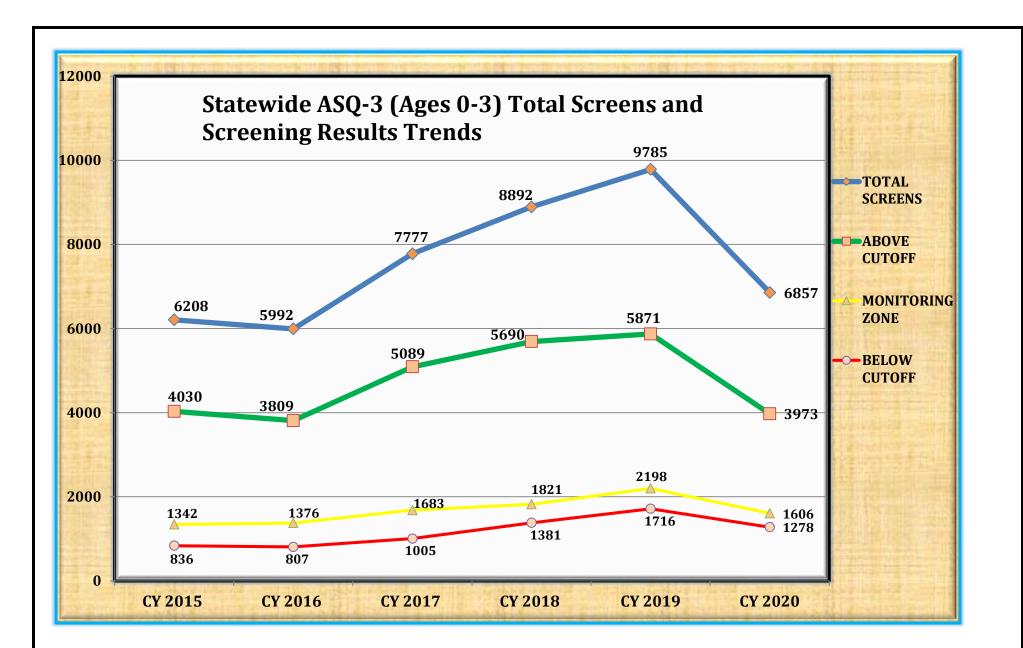
Appendix A: Weber State University and Prevent Child Abuse Utah, Parents As Teachers-Home Visiting Program, ASQ Data Analysis

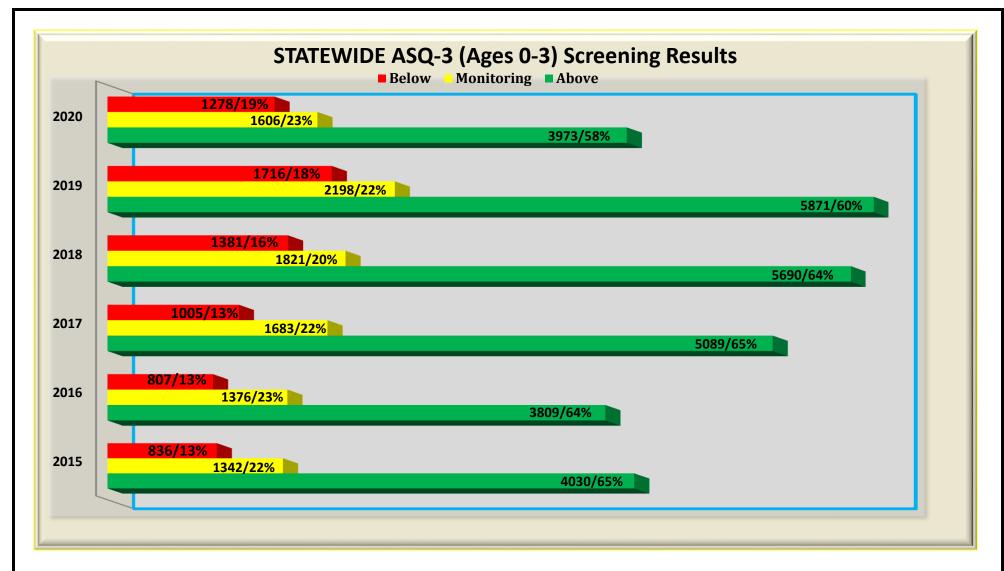


• Screens that score below cutoff are frequently repeated with the same child. The data presented here addresses this issue by identifying a distinct percentage of children that score below cutoff. One can ascertain, as we increase the number of screens given, we discover more children that are behind in one or more developmental domains. It is important to note, that although in 2019 and 2020, we discovered 8-9% of children in this sample size were experiencing developmental delay, several community-based programs had as many as 21% of their children facing developmental delay.

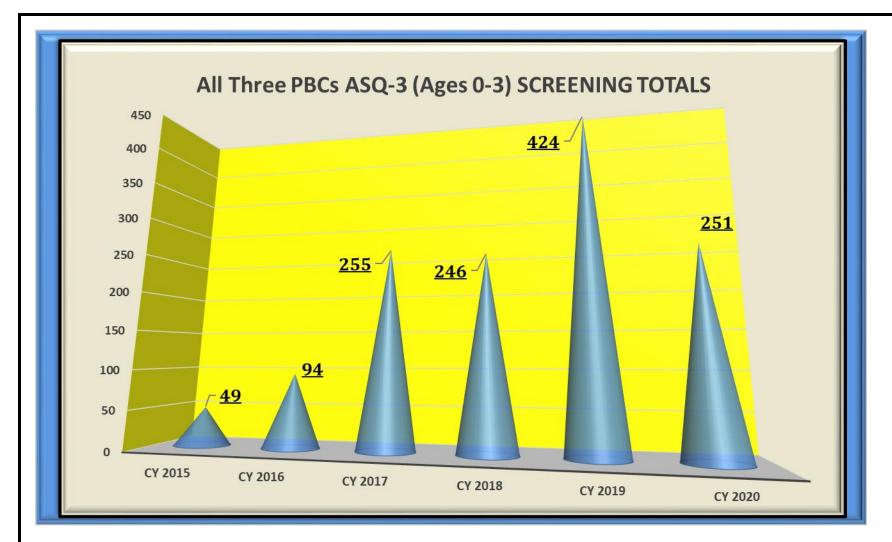


Between 2016 and 2019, ASQ-3 screens for 0-3 year olds across the state, increased by 63%.
 A statewide decrease in screens in 2020 is attributed to early childhood service disruptions related to COVID19.
 In 2021, through July, the UDOH ASQ Online Account captured 3063 screens for children 0-3.

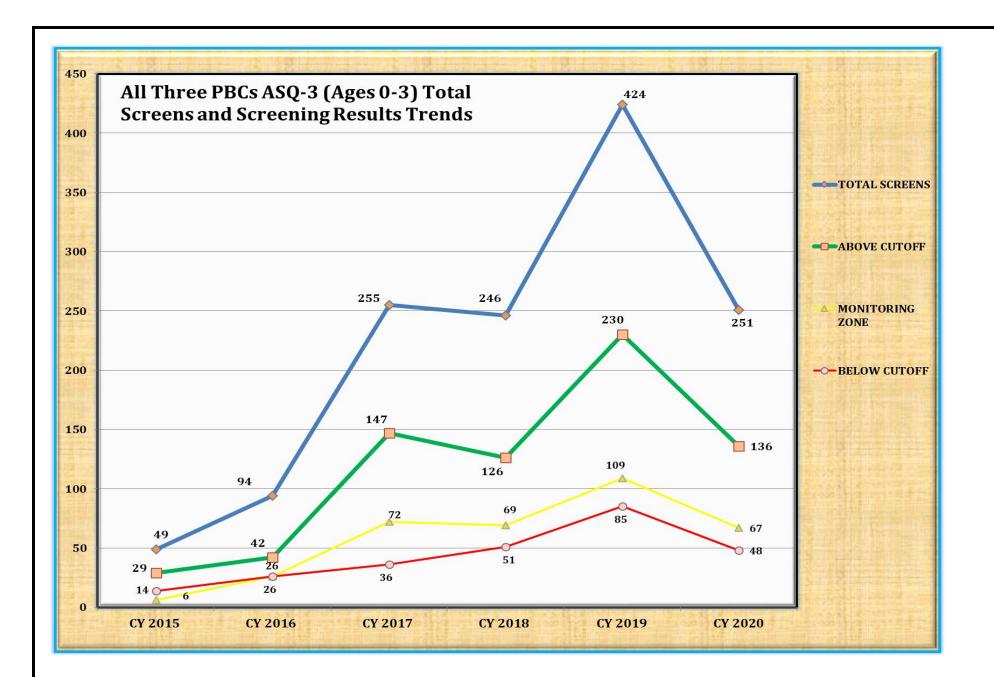


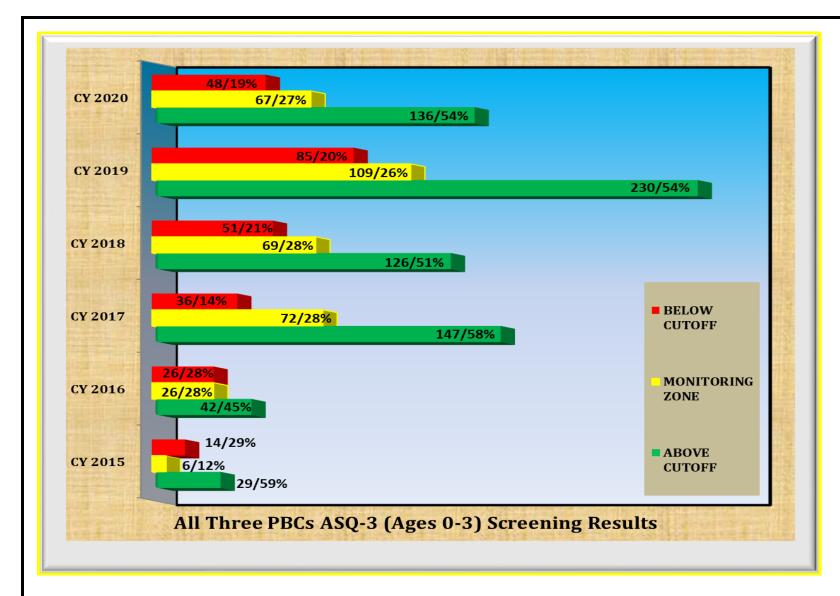


• We consistently see 58-65% of the ASQ-3 screens administered to 0-3 year olds are above cutoff, 20-23% of screens completed are in the monitoring zone and 13-19% of screens facilitated result in below cutoff scores in one or more domains. The five developmental domains assessed by ASQ-3 screens are Communication, Gross Motor, Fine Motor, Problem Solving and Personal-Social.



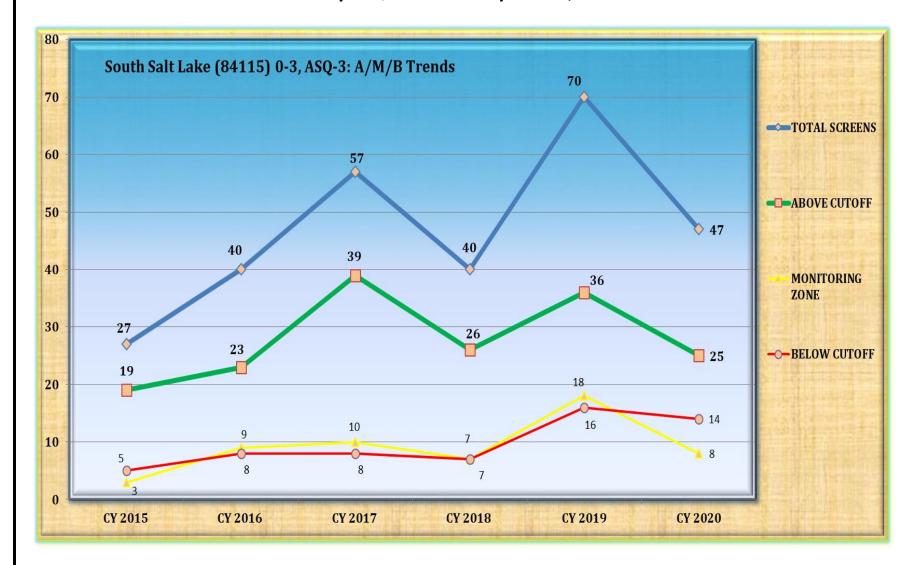
Between 2015 and 2019, ASQ-3 screens for 0-3 year olds residing within the PBCs increased by 765%.
 A decrease in community-based screens in 2020 is attributed to early childhood service disruptions related to COVID19.
 From January 1 - July 31 2021, PBC screening programs enrolled in the UDOH ASQ Online account, completed 98 ASQ-3 screens for 0-3 year olds.

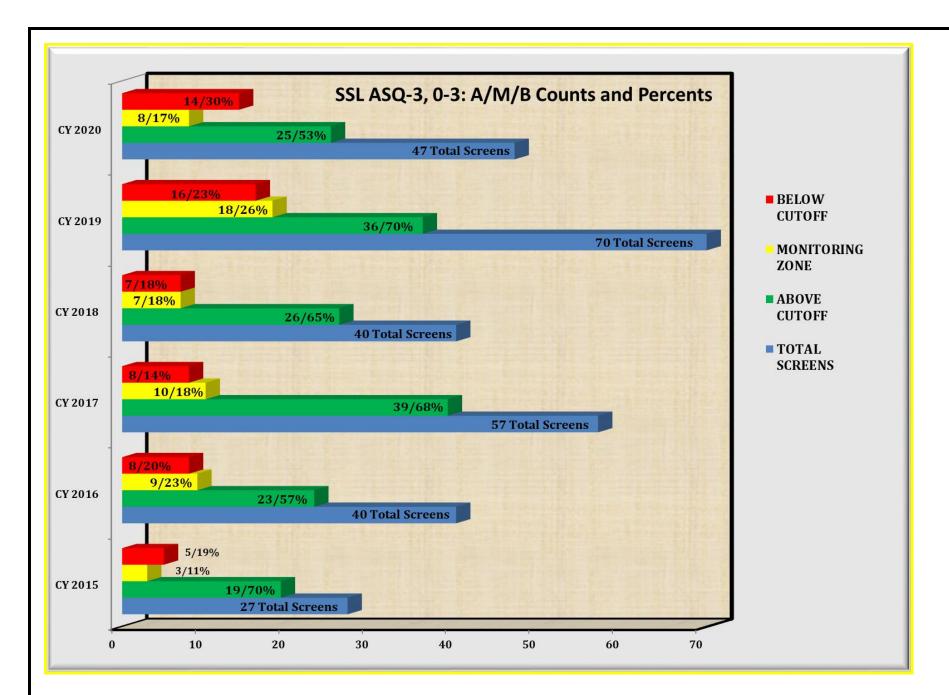


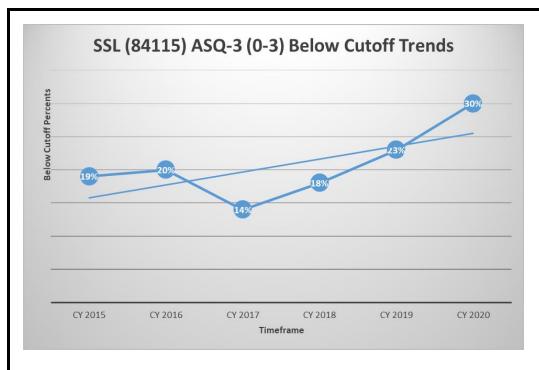


• ASQ-3, 0-3, PBC screens conducted between Jan-July 2021 resulted in the following, 41% (40) above monitoring, 34% (33) monitoring zone and below cutoff 26% (25).

South Salt Lake Place Based Community ASQ-3 data for 0-3 year olds; focus area 84115.



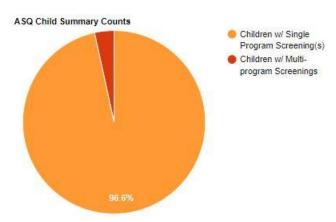




The 84115 data presented above displays ASQ-3 Below Cutoff screening trends (2015-2020) for 0-3 year olds. Please interpret this set of data with caution due to small sample sizes. The data below is from the UDOH-Early Childhood Integrated Data System and displays distinct child counts (ages 0-3) screened (ASQ-3) between 2016-2020 in 84115.

ASQ Distinct Child Counts &

Number of children with ASQ screening(s) from a single program	140
Number of children with ASQ screenings from multiple programs	5
Number of children who have ASQ screening(s)	145

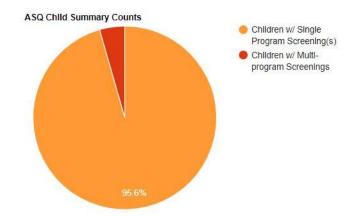


The data below is from the UDOH-Early Childhood Integrated Data System and displays distinct child counts (ages 0-3) screened (ASQ:SE-2) between 2016-2020 in 84115.

ASQ: SE:2

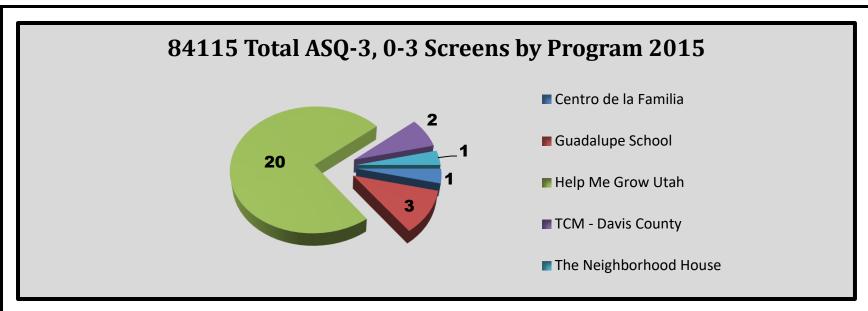
ASQ Distinct Child Counts &

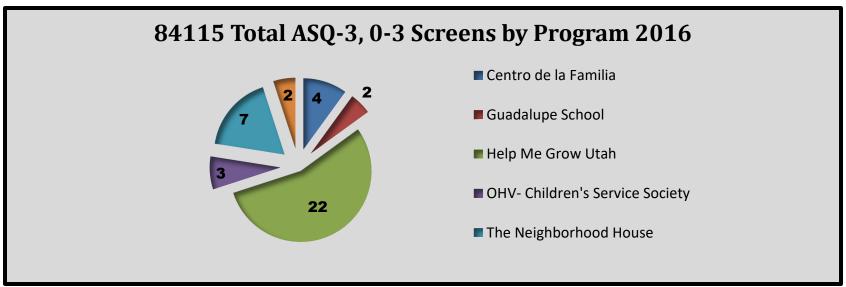
Number of children with ASQ screening(s) from a single program	43
Number of children with ASQ screenings from multiple programs	2
Number of children who have ASQ screening(s)	45



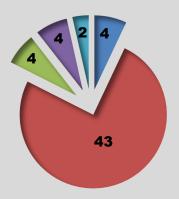
In part, due to the collective impact efforts described here, the following services were received by <u>1,625 distinct children</u>, residing in 84115, that were still under-six years old on 12/31/20 (UDOH-ECIDS Report #1):

Program:	Summary and Distinct Counts of Children served in 84115:
DWS-OCC: Child Care Subsidy Program	411
UDOH-CSHCN: Baby Watch Early Intervention IDEA Part C Program	509
UDOH-MCH: Early Childhood Utah ASQ Program	220
UDOH-MCH: WIC Program	1321
UDOH-MCH: Home Visiting Program	54
ECIDS Summary Count	2,515
ECIDS Distinct Child Count	1,625



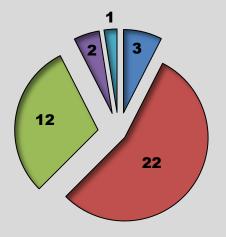




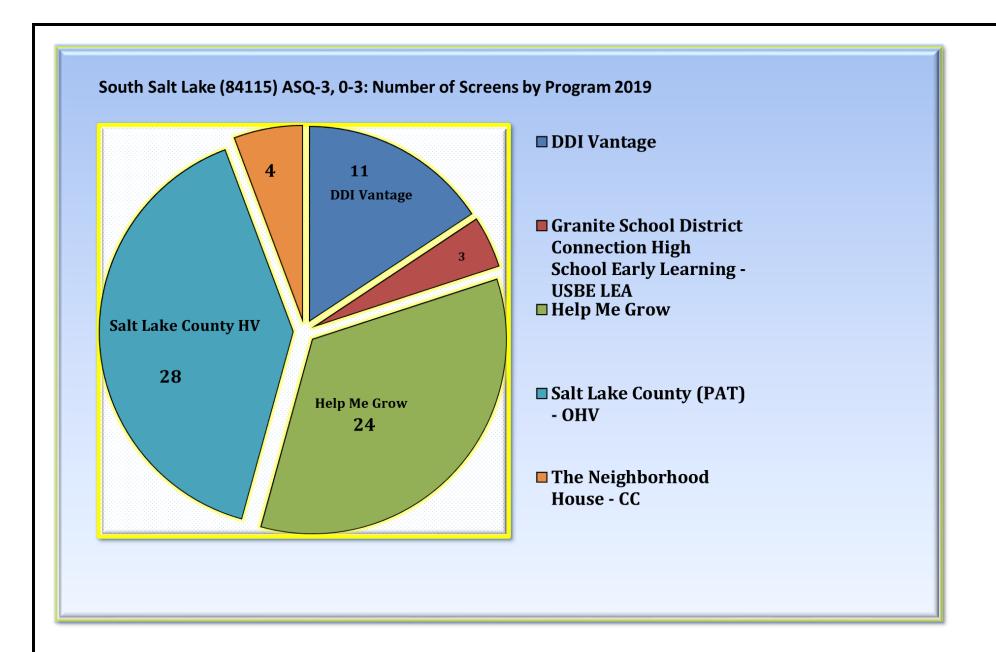


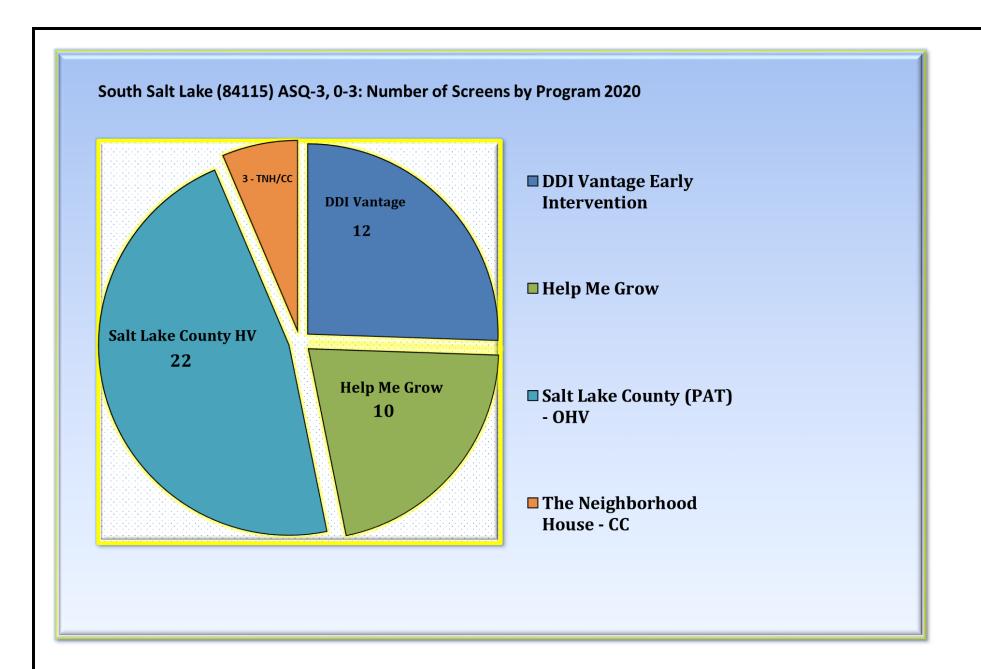
- Centro de la Familia
- Help Me Grow Utah
- OHV- Children's Service Society
- OHV- Salt Lake County Parents as Teachers
- The Neighborhood House

84115 Total ASQ-3, 0-3 Screens by Program 2018

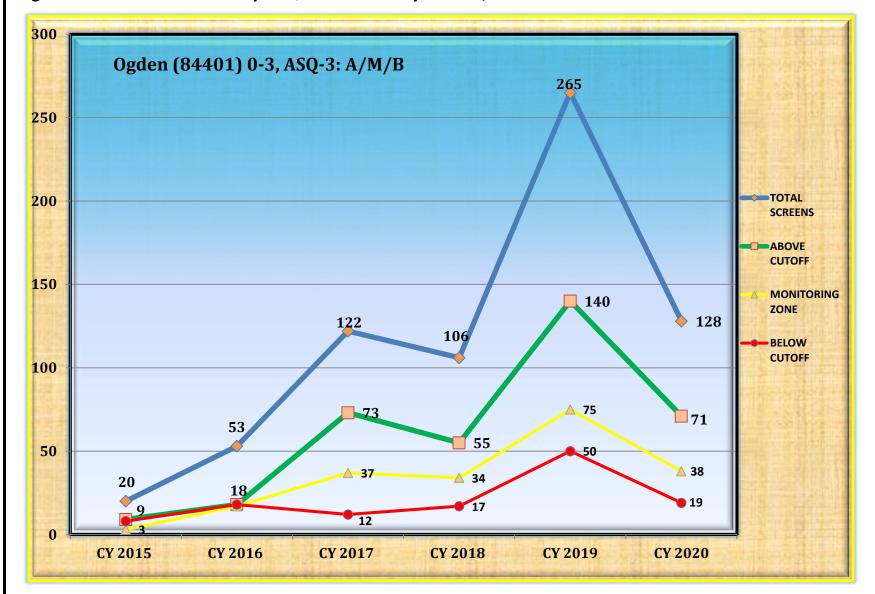


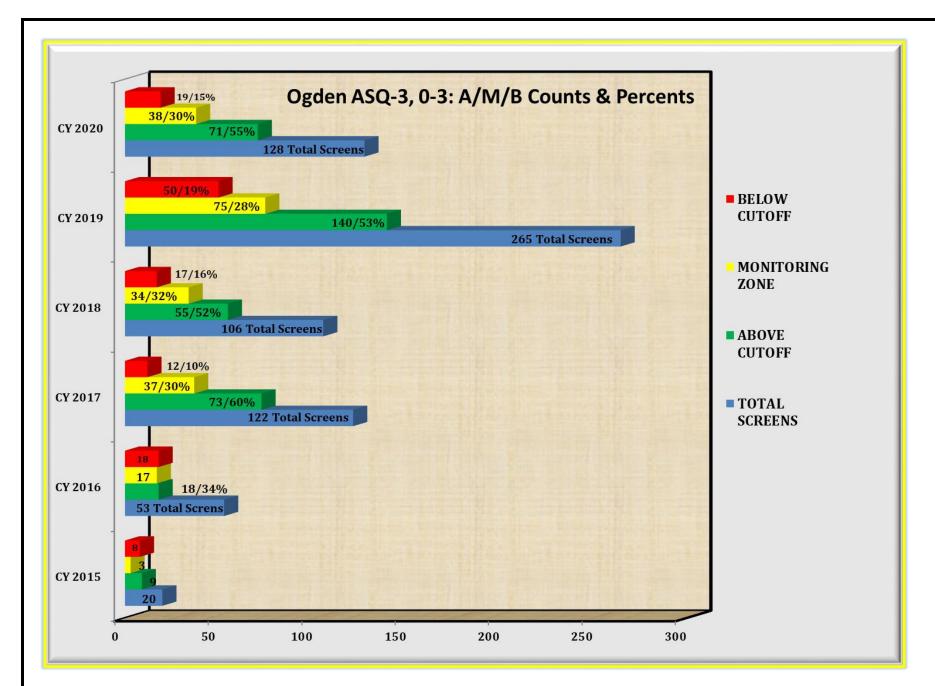
- Granite SD Connection HS
- Help Me Grow Utah
- OHV- Salt Lake County Parents as Teachers
- The Neighborhood House
- Ukids

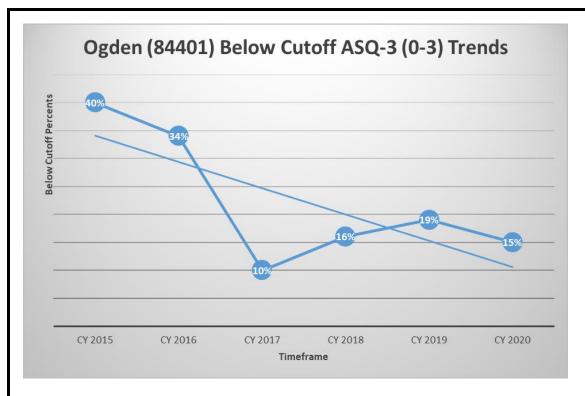




Ogden Place Based Community ASQ-3 data for 0-3 year olds; focus area 84401

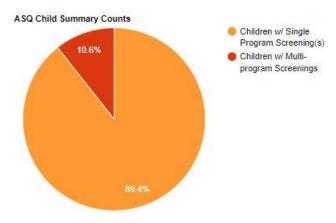






The 84401 data presented above displays ASQ-3 below cutoff screening trends (2015-2020) for 0-3 year olds. Please interpret 2015/2016 data with caution due to small sample sizes. The data below is from the UDOH-Early Childhood Integrated Data System and displays distinct child counts (ages 0-3) screened (ASQ-3) between 2016-2020 in 84401.



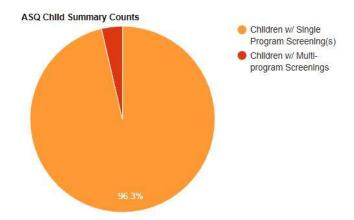


The data below is from the UDOH-Early Childhood Integrated Data System and displays distinct child counts (ages 0-3) screened (ASQ:SE-2) between 2016-2020 in 84401.

ASQ: SE-2

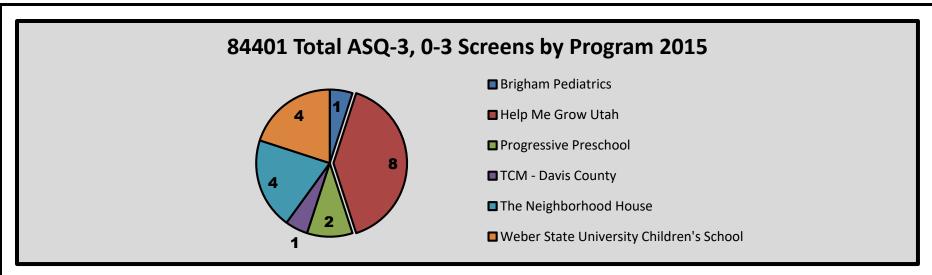


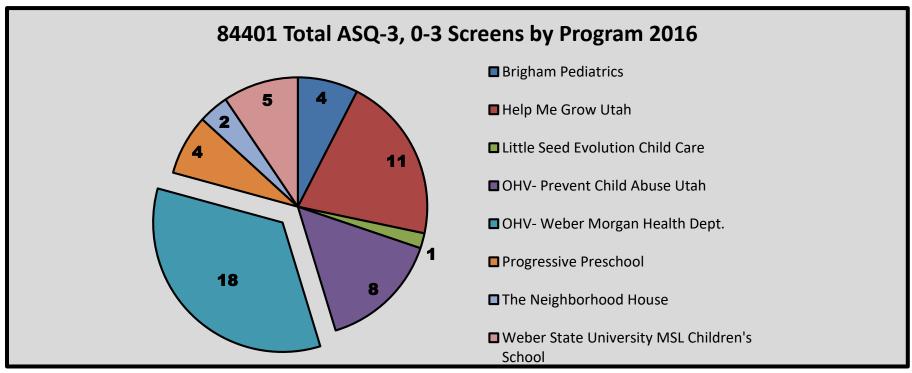
Number of children with ASQ screening(s) from a single program	131
Number of children with ASQ screenings from multiple programs	5
Number of children who have ASQ screening(s)	136

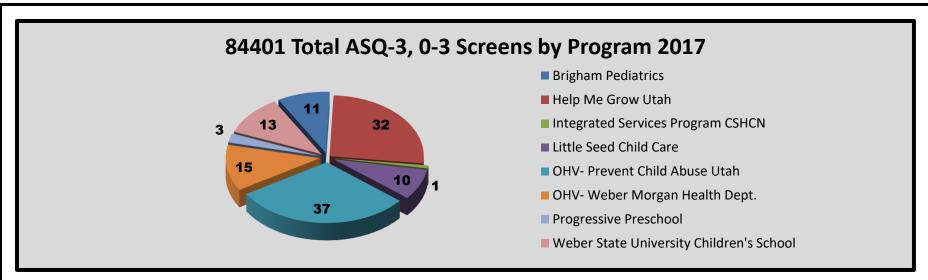


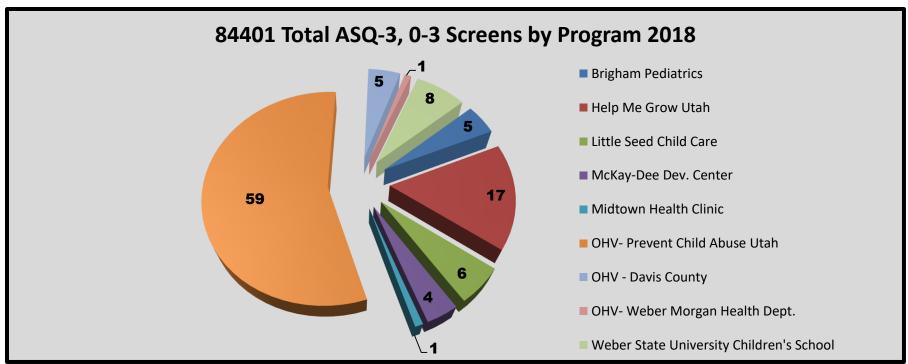
In part, due to the collective impact efforts described here, the following services were received by <u>2,385 distinct children</u>, residing in 84401, that were still under-six years old on 12/31/20 (UDOH-ECIDS Report #1):

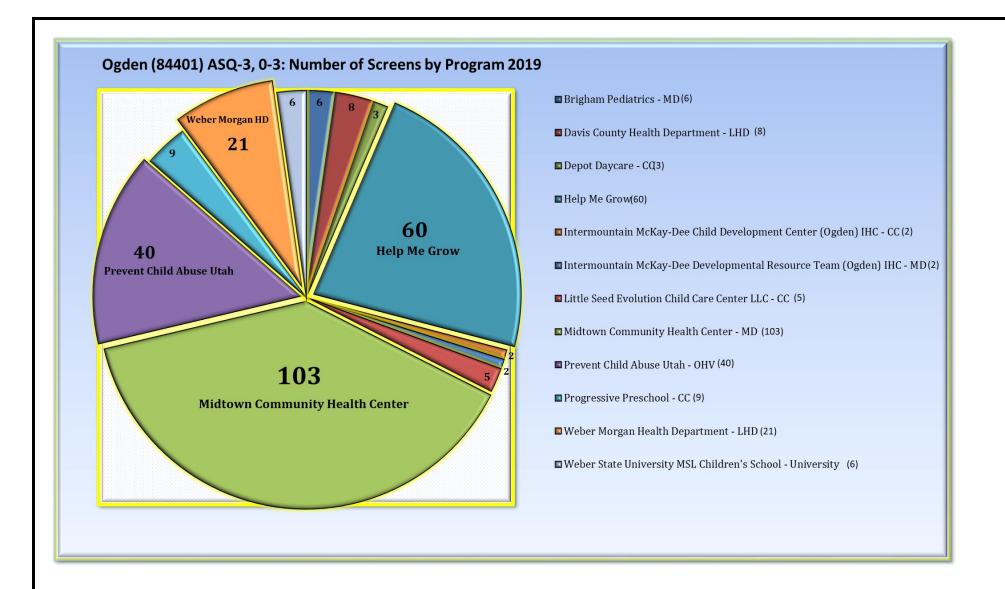
Program:	Summary and Distinct Counts of Children served in 84401:
DWS-OCC: Child Care Subsidy Program	608
UDOH-CSHCN: Baby Watch Early Intervention IDEA Part C Program	819
UDOH-MCH: Early Childhood Utah ASQ Program	631
UDOH-MCH: WIC Program	1,851
UDOH-MCH: Home Visiting Program	135
ECIDS Summary Count	4,044
ECIDS Distinct Child Count	2,385

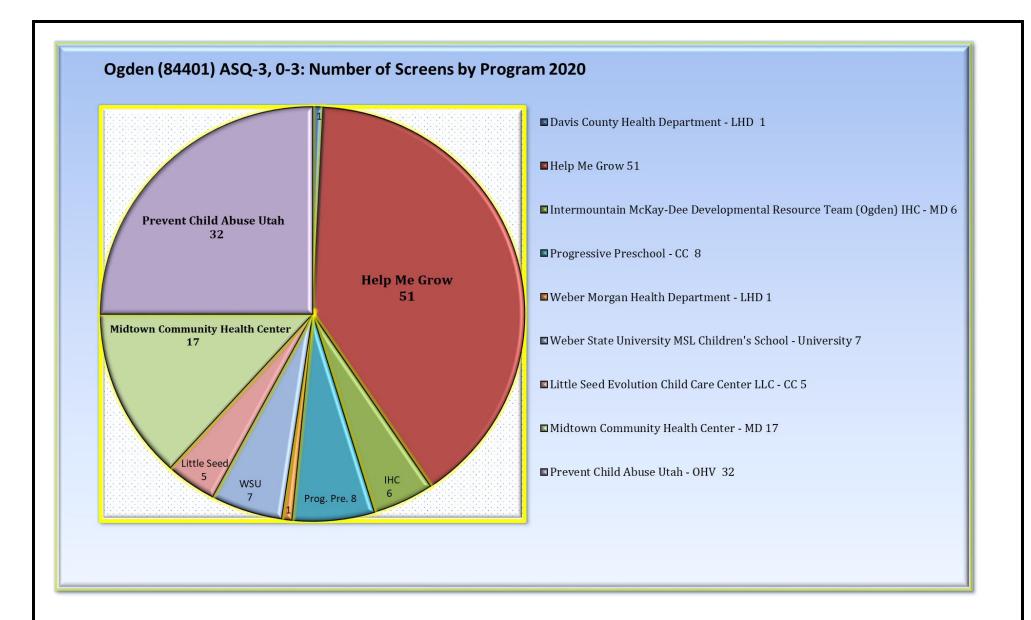




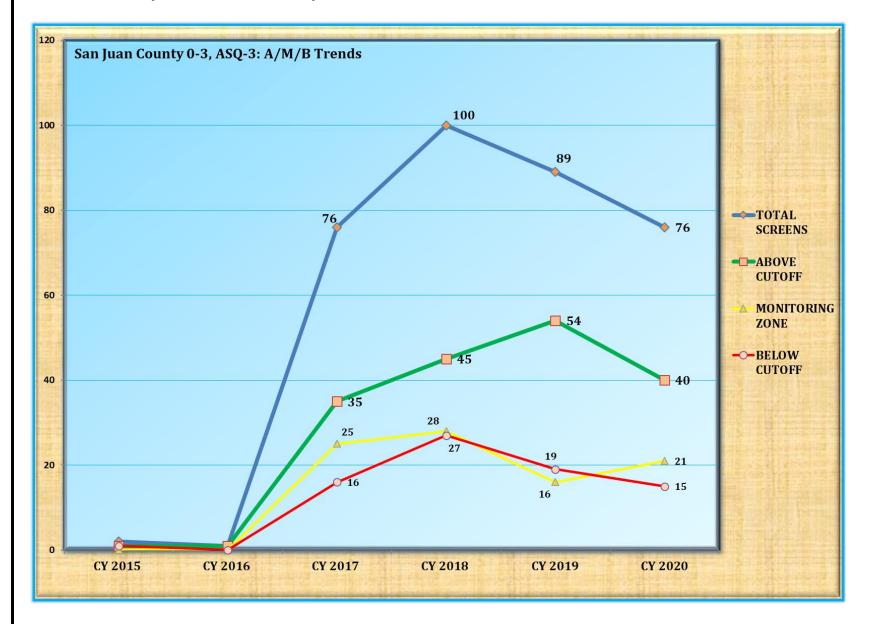


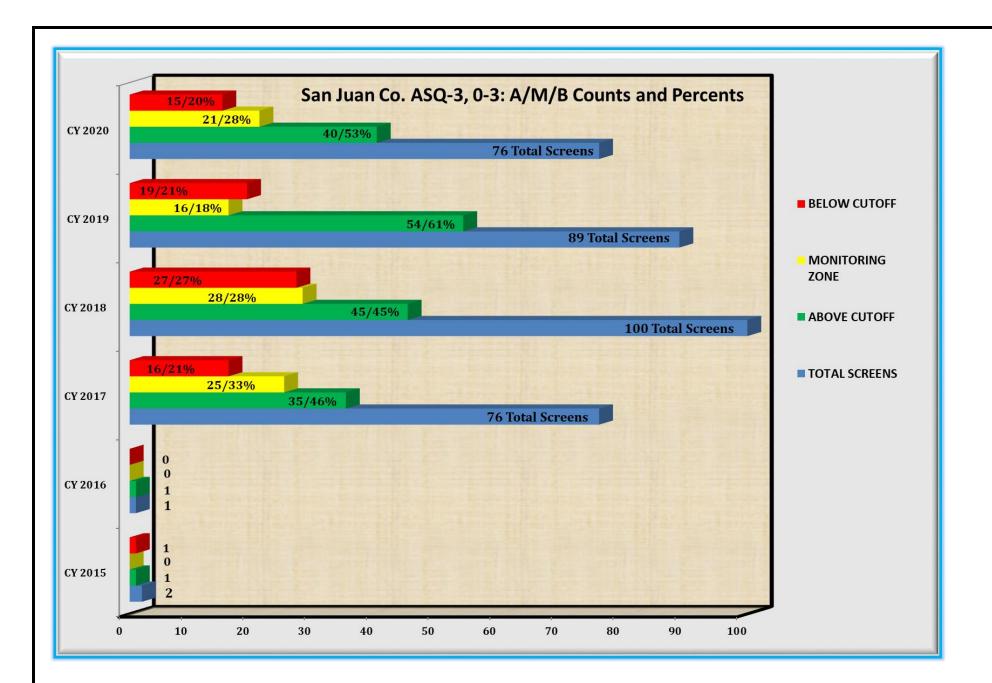


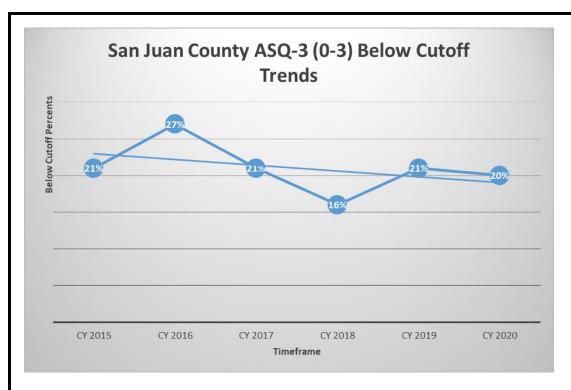




San Juan County ASQ-3 data for 0-3 year olds.



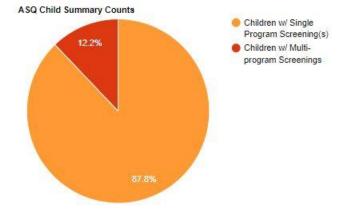




The San Juan County data presented above displays ASQ-3 below cutoff screening trends (2015-2020) for 0-3 year olds. Please interpret the 2015/16 data with caution due to small sample sizes. The data below is from the UDOH-Early Childhood Integrated Data System and displays distinct child counts (ages 0-3) screened (ASQ-3) between 2016-2020 for San Juan County.

189





Number of children who have ASQ screening(s)

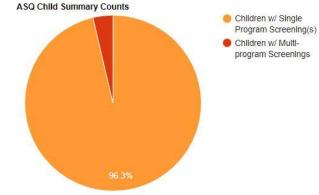
The data below is from the UDOH-Early Childhood Integrated Data System and displays distinct child counts (ages 0-3) screened (ASQ:SE-2) between 2016-2020 for San Juan County.

ASQ: SE-2:



Number of children who have ASQ screening(s)

Number of children with ASQ screenings from multiple programs

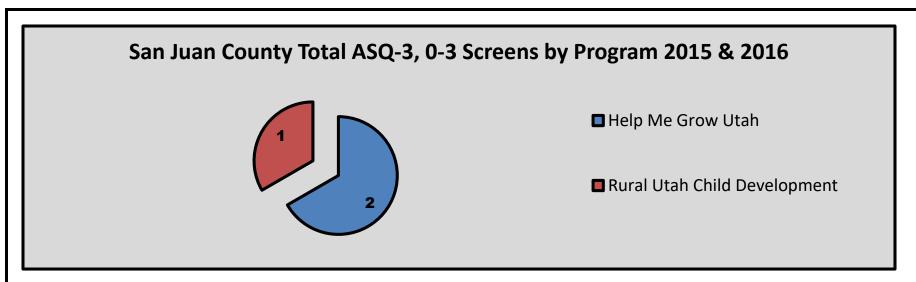


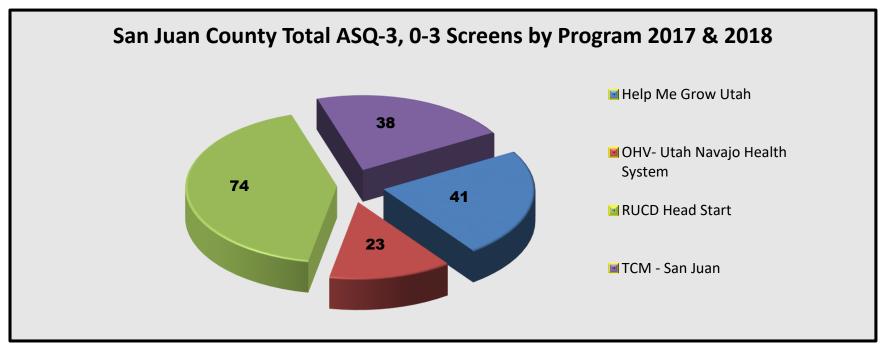
In part, due to the collective impact efforts described here, the following services were received by <u>665 distinct children</u>, residing in San Juan County, that were still under-six years old on 12/31/20 (UDOH-ECIDS Report #1):

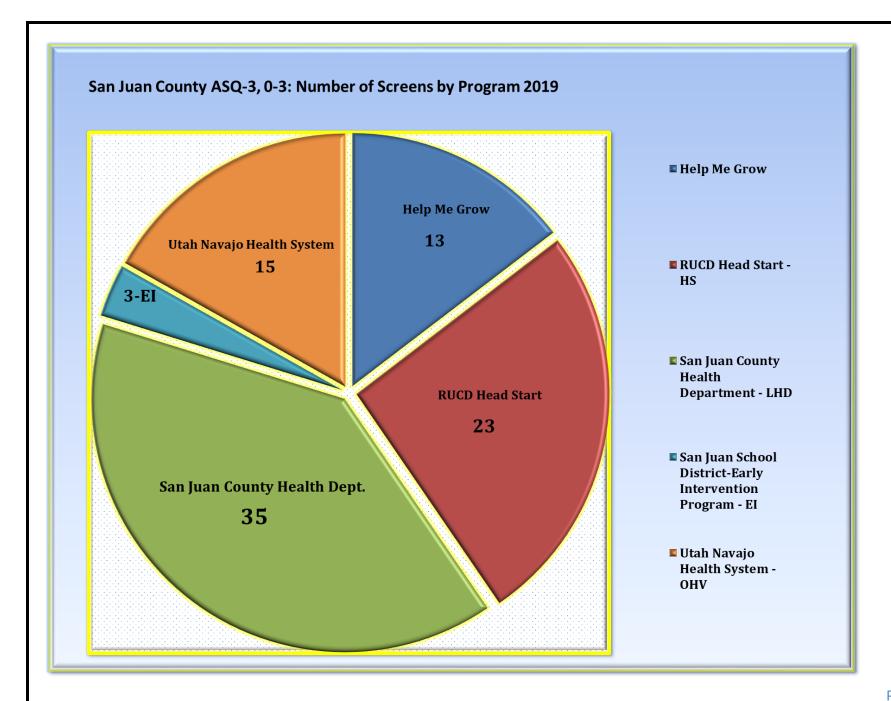
5

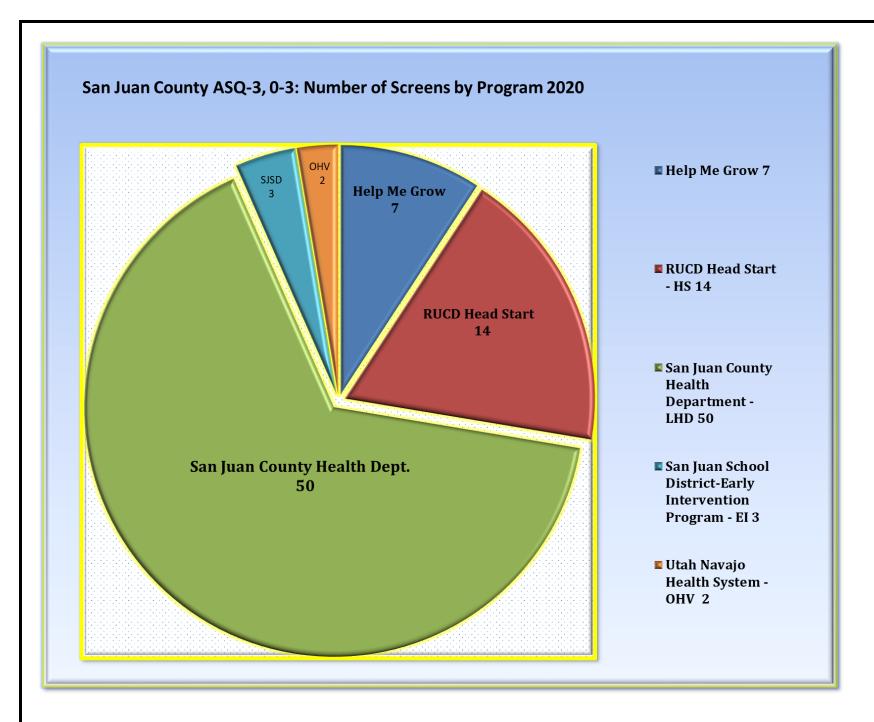
136

Program:	Summary and Distinct Counts of Children served in San Juan County:
DWS-OCC: Child Care Subsidy Program	70
UDOH-CSHCN: Baby Watch Early Intervention IDEA Part C Program	203
UDOH-MCH: Early Childhood Utah ASQ Program	212
UDOH-MCH: WIC Program	518
UDOH-MCH: Home Visiting Program	62
ECIDS Summary Count	1,065
ECIDS Distinct Child Count	665

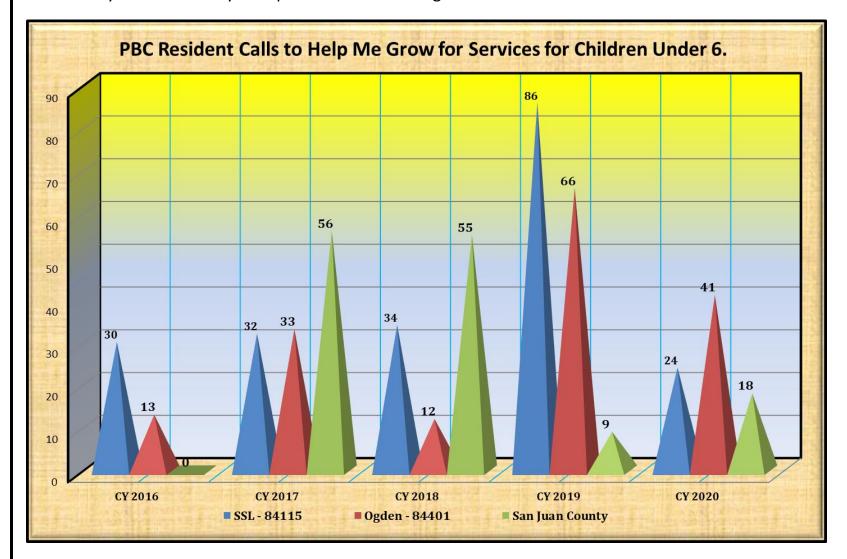








United Way of Utah County's Help Me Grow Utah Program. PBC service data 2016-2020.



Help Me Grow connects families with a Care Coordinator and to resources families and young children may need.

Appendix A: Weber State University and Prevent Child Abuse Utah - ASQ Analysis

Weber State University: ASQ Longitudinal Data Review for Prevent Child Abuse Utah's, Parents as Teachers, Home Visiting Program November 2015-November 2020

Summary:

The Prevent Child Abuse Utah Parents as Teachers (PAT) program has completed a total of 865 screens using the *Ages and Stages Questionnaires*, Third Edition (ASQ-3) on 378 children 0-3 years old from 2015 to 2020. Across the five developmental domains, approximately 6-8% of screenings were scored as strong risk for delay, while 10-17% scored as a potential risk, and 75-83% remained on track. PAT children were more likely to experience delays in communication and problem solving than gross/fine motor and personal/social.

Of the 195 (52%) PAT children who were screened more than once, 3 screening profiles were identified (Chen, Dueker, & Cowling, 2018):

- Single domain risk profile (22%): showed a low score in a single domain for 2 or more screens. The particular developmental domain that was low varied by child and was relatively equally distributed across the five ASQ domains.
- Pervasive risk profile (17%): had low scores in at least two of the five ASQ domains for 2 or more screens indicating high risk of developmental delay across multiple developmental domains.
- On track profile (61%): no low scores in any ASQ domain for all screens indicating very little risk of developmental delay.

A cohort analysis was done on 31 "most highly engaged" PAT children who had the initial screening younger than 12 months during 2015-2017 and were screened more than 4 times. At the initial screening, 61% of these children scored in *the single domain or pervasive risk profile for delay*. The percentage dropped to 48% at the 4th screening. The same trend was found with all five developmental domains except for Problem Solving where the risks remained unchanged. The finding suggests that the risks for delay decreased over time and were improving in all five developmental areas when children were screened multiple times at later age intervals.

There are several potential explanations for these results. Overall, PCAU has effectively increased the ability to send referrals and connect families of young children to appropriate professional resources and services. These intervention and prevention activities likely decreased the potential risks for delay in the children assessed. In addition, parents and caregivers are more aware of the screening itself and therefore are able to address and understand the delay over time.

Table 1. Total Number of Screens

Total number of screens	865
Number of children screened	378
Number of children screened more than once	195 (52%)

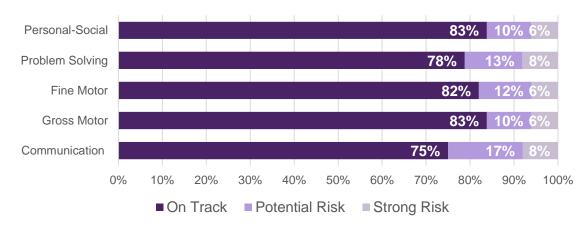
Table 2. Number of Screens by Age

Age Interval	N						
2 month	50	10 month	13	20 month	23	33 month	21
4 month	52	12 month	71	22 month	14	36 month	75
6 month	54	14 month	18	24 month	83	42 month	34
8 month	19	16 month	16	27 month	32	48 month	46
9 month	46	18 month	80	30 month	60	54 month	28
						60 month	30

Table 3. Level of Risk by Developmental Domain

	On Track		Potential & Strong Risk		Potential Risk		Strong Risk	
	N	%	N	%	N	%	N	%
Communication	651	75%	214	25%	146	17%	68	8%
Gross Motor	722	83%	143	16%	88	10%	55	6%
Fine Motor	709	82%	156	18%	100	12%	56	6%
Problem Solving	676	78%	188	21%	116	13%	72	8%
Personal-Social	722	83%	142	16%	87	10%	55	6%





Children with multiple screens; progression from first screening to last screener, of all children who took more than one screener, 31% had no areas of concern at any screener.

Communication	Last Screening							
	On Track	Monitorin	ıg (N=35)	Below (N=15)				
First Screening	%	N	%	N	%	N		
On Track (N=144)	81%	116	16%	23	3%	5		
Monitoring (N=36)	61%	22	25%	9	14%	5		
Below (N=15)	47%	7	20%	3	33%	5		

	Gross Mo	tor	Last Scre	Last Screening			
	On Track	(N=169)	Monitorin	ng (N=16)	Below (N=10)		
First Screening	%	N	%	N	%	N	
On Track (N=156)	92%	144	5%	8	3%	4	
Monitoring (N=24)	79%	19	13%	3	8%	2	
Below (N=15)	40%	6	33%	5	27%	4	

	Fine Moto	r	Last Scre	ening		
	On Track	(N=161)	Monitorin	ıg (N=27)	Below	(N=7)
First Screening	%	N	%	N	%	N
On Track (N=155)	88%	136	11%	17	1%	2
Monitoring (N=19)	68%	13	32%	6	0%	0
Below (N=21)	57%	12	19%	4	24%	5

	Problem Solving On Track (N=154)		Last Screening Monitoring (N=19)		Below (N=22)	
First Screening	%	N	%	N N	%	N
On Track (N=148)	83%	123	9%	13	8%	12
Monitoring (N=28)	79%	22	11%	3	11%	3
Below (N=19)	47%	9	16%	3	37%	7

	Personal-	Social	Last Screening				
	On Track	On Track (N=172)		Monitoring (N=13)		Below (N=10)	
First Screening	%	N	%	N	%	N	
On Track (N=154)	92%	142	7%	10	1%	2	
Monitoring (N=27)	81%	22	4%	1	15%	4	
Below (N=14)	57%	8	14%	2	29%	4	

Risk Profile

Single domain risk profile: showed a low score in a single domain for 2 or more screens.

Pervasive risk profile: had low scores in at least two of the five ASQ domains for 2 or more screens indicating high risk of developmental delay across multiple developmental domains.

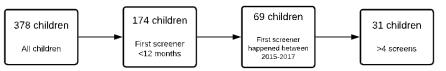
On track profile: no low scores in any ASQ domain for all screens indicating very little risk of developmental delay.

Profile	Percentage	N
On Track Profile	61%	119
Single Domain Risk Profile	22%	43
Pervasive Risk Profile	17%	33

Cohort Analysis

An in-depth review of children who are highly engaged with PAT

- First screening was <12 months
- First screening was in 2015-2017
- Had more than 4 screenings



Findings

- 61% were at potential risk or high risk at initial screening
- 48% were at potential risk or high risk at 4th screening

First to Last Screening

- Communication:
 - o 6 children had a risk profile at their first screening 19%
 - o 68% started on track and stayed on track
 - o 12% started on track and moved to a risk profile
 - o 16% started on a risk profile and moved on track
 - o 5 children had a risk profile at their last screening 16%
- Gross Motor:
 - 12 children had a risk profile at their first screening 39%
 - 58% started on track and stayed on track

- o 3% started on track and moved to a risk profile
- 26% started on a risk profile and moved to on track
- 5 children had a risk profile at their last screening 16%

Fine Motor:

- o 7 children had a risk profile at their first screening 23%
- o 77% started on track and stayed on track
- 16% started on a risk profile and moved to on track
- o 2 children had a risk profile at their last screening 6%

Problem Solving

- o 7 children had a risk profile at their first screening 23%
- 5 61% started on track and stayed on track
- 16% started on track and moved to a risk profile
- o 16% started on a risk profile and moved to on track
- o 7 children had a risk profile at their last screening 23%

Personal Social

- o 9 children had a risk profile at their first screening 29%
- 65% started on track and stayed on track
- 6% started on track and moved to a risk profile
- o 13% started on a risk profile and moved to on track
- 7 children had a risk profile at their last screening 23%